

## **The HIV/AIDS Epidemic among Communities of Color in Massachusetts – Detailed Data Tables and Technical Notes:**

### **Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data**

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Diseases, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2014, this resulted in the removal of 4,135 HIV/AIDS cases, of which 973 have died and 3,162 were living. These persons living with HIV/AIDS may still continue to reside and receive care in the Commonwealth. The total number of persons living with HIV/AIDS, irrespective of location at diagnosis, is the basis for MDPH service planning. This change is partially a result of increased activities required by the Centers for Disease Control and Prevention (CDC) for de-duplication among states in an effort to identify cases that are counted multiple times in the National HIV/AIDS Surveillance System. The cases are assigned to the state that reports the earliest date of AIDS diagnosis if available. If the case has not progressed to AIDS, the case is assigned to the state with the earliest HIV diagnosis date. Please note that previous HIV/AIDS fact sheets, data reports and presentations included cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the MDPH HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual risk category for men; those cases have been reassigned to the no identified risk (NIR) category. The presumed heterosexual reported risk category was used with the intention of identifying HIV risk for women when sex with men is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. Twenty-nine percent of women living with HIV/AIDS and 40% of recent female HIV diagnoses are reported in the presumed heterosexual risk category. The application of the presumed heterosexual risk category to men is overly inclusive in that HIV transmission from women to men is biologically less probable, and there are alternate reported risks that are possible for men, including sex with other men (MSM) or IDU. The CDC reports men diagnosed with HIV/AIDS who report sex with women as their only risk factor, without corresponding partner risk or HIV status information, in the NIR category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for men in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual risk categories for women.

**Table 1. Total number of people reported with HIV infection or AIDS<sup>1</sup> by mortality status on December 31, 2013: Massachusetts**

	<b>N</b>	<b>%</b>
People Living with HIV/AIDS	19,165	59%
<i>People Living with HIV/AIDS and First Diagnosed in Another U.S. State</i>	3,162	-- <sup>2</sup>
People Reported with HIV or AIDS Who Are Deceased	13,180	41%
<b>Total Number of People Reported with HIV Infection or AIDS<sup>2</sup></b>	<b>32,345</b>	<b>100%</b>

<sup>1</sup> Does not include individuals diagnosed with HIV infection (non-AIDS) who died prior to January 1, 1999 or who were not in care on January 1, 1999

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts; therefore people living with HIV/AIDS and first diagnosed in another U.S. state are not included in the total number of people reported with HIV Infection or AIDS.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/14

**Table 2. People living with HIV/AIDS on December 31, 2013 by gender, race/ethnicity, place of birth and health service region: Massachusetts<sup>1</sup>**

<b>People Living with HIV/AIDS on 12/31/13</b>		
<b>Gender:</b>	<b>N</b>	<b>%</b>
Men	13,680	71%
Women	5,485	29%
<b>Race/Ethnicity:</b>	<b>N</b>	<b>%</b>
White, non-Hispanic	8,297	43%
Black, non-Hispanic	5,745	30%
Hispanic/Latino	4,665	24%
Asian/Pacific Islander	330	2%
Other/Unknown	128	1%
<b>Place of Birth:</b>	<b>N</b>	<b>%</b>
US	12,522	65%
Puerto Rico/US dependency <sup>2</sup>	1,949	10%
Non-US	4,694	24%
<b>Health Service Region<sup>3</sup>:</b>	<b>N</b>	<b>%</b>
Boston HSR	6,079	32%
Central HSR	1,632	9%
Metro West HSR	2,799	15%
Northeast HSR	3,039	16%
Southeast HSR	2,616	14%
Western HSR	2,069	11%
Prison <sup>4</sup>	924	5%
<b>Total<sup>5</sup></b>	<b>19,165</b>	<b>100%</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Ninety-eight percent of people living with HIV/AIDS who were born in a US dependency were born in Puerto Rico, <1% were born in the US Virgin Islands, <1% were born in Guam and 2% were born in an unknown dependency.

<sup>3</sup> Reflects the health service region of a person's residence at the time of report (not necessarily current residence); See Epidemiologic Profile General Appendices, Health Service Region Maps, available at [http://www.mass.gov/dph/aids/research/profile2005/app5\\_hrs\\_maps.pdf](http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf) for configuration of health service regions

<sup>4</sup> HSRs are regions defined geographically to facilitate targeted health service planning. While prisons are not an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. The prisons category represents persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status.

<sup>5</sup> Total includes seven people living with HIV/AIDS with unknown HSR; Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding). Data as of 1/1/14

**Table 3. People living with HIV/AIDS by reported risk: Massachusetts<sup>1</sup>**

People Living with HIV/AIDS on 12/31/13		
Reported risk:	N	%
Male-to-male sex (MSM)	7,137	37%
Injection drug use (IDU)	3,683	19%
MSM/IDU	661	3%
Receipt of blood/blood products/other	67	<1%
Pediatric	339	2%
Total heterosexual sex (HTSX)	2,720	14%
• HTSX w/ an injection drug user	889	5%
• HTSX w/ bisexual man (women only)	44	<1%
• HTSX w/ a person w/ HIV or AIDS	1,742	9%
• Other HTSX <sup>2</sup>	45	<1%
Total undetermined/other	4,558	24%
• Presumed heterosexual sex <sup>3</sup>	1,714	9%
• Undetermined/other <sup>4</sup>	2,844	15%
<b>Total</b>	<b>19,165</b>	<b>100%</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Includes heterosexual sex with a person who received blood/blood products.

<sup>3</sup> Includes woman sex with man of unknown HIV status or risk. This category is limited to women.

<sup>4</sup> Includes man sex with woman of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

*Note: The category of “presumed heterosexual” is used in Massachusetts to re-assign women who are reported with an exposure of heterosexual sex, but only with a partner of unknown HIV status or behavioral risk. Massachusetts uses the category of presumed heterosexual to distinguish these women from other undetermined cases about which we know less. Prior to January 1, 2011, the presumed heterosexual category was also used to report HIV data in men. The rationale for the application of the presumed heterosexual reported risk category to women only has been addressed in the MDPH OHA report “Intersecting Risks: HIV Infection among Heterosexual Women and Men in Massachusetts.” (2010)*

[http://www.mass.gov/Eeohhs2/docs/dph/aids/intersecting\\_risks.pdf](http://www.mass.gov/Eeohhs2/docs/dph/aids/intersecting_risks.pdf). Nationally, the Centers for Disease Control and Prevention categorize “presumed heterosexual” cases as “no identified risk” (NIR). As such, comparisons of the presumed heterosexual category cannot be made to national data. Caution should be used in interpreting data for presumed heterosexual, as it is still not clear what the exposure risk was for women in this category. Although a person may not report other risk behaviors, such as injection drug use to a health care provider, it does not exclude the possibility that an individual has experienced these other risks. There are many barriers to disclosing HIV risk behaviors in the health care setting such as a limited patient-provider relationship or stigma.

**Table 4. People living with HIV/AIDS on December 31, 2013 by gender and race/ethnicity: Massachusetts<sup>1</sup>**

Race/Ethnicity:	Men		Women		Total	
	N	%	N	%	N	%
White (non-Hispanic)	6,927	51%	1,370	25%	8,297	43%
Black (non-Hispanic)	3,234	24%	2,511	46%	5,745	30%
Hispanic	3,179	23%	1,486	27%	4,665	24%
Asian/Pacific Islander	253	2%	77	1%	330	2%
Other/Unknown	87	1%	41	1%	128	1%
<b>Total<sup>2</sup></b>	<b>13,680</b>	<b>100%</b>	<b>5,485</b>	<b>100%</b>	<b>19,165</b>	<b>100%</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 5. People diagnosed with HIV infection by gender and race/ethnicity: Massachusetts<sup>1</sup>, 2010–2012<sup>2</sup>**

Race/Ethnicity:	Men		Female		State Total	
	N	%	N	%	N	%
White (NH)	674	45%	103	18%	777	38%
Black (NH)	362	24%	303	54%	665	32%
Hispanic/Latino	398	26%	135	24%	533	26%
API	54	4%	12	2%	66	3%
Other/Unknown	15	1%	9	2%	24	1%
<b>Total</b>	<b>1,503</b>	<b>100%</b>	<b>562</b>	<b>100%</b>	<b>2,065</b>	<b>100%</b>

<sup>1</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available 10 year period after the implementation of HIV infection reporting in 1999.

(NH) = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding). Data as of 1/1/14

## Explanation of age adjusted rates

A “rate” of a disease per 100,000 population is a useful way to compare groups that have substantially different population sizes rather than relying on the raw number of cases. For example, the number of people living with HIV/AIDS on December 31, 2013 who are Hispanic/Latino, is 4,665 whereas the number of people living with HIV/AIDS who are white (non-Hispanic) is 8,297. Although the *number* of people living with HIV/AIDS who are Hispanic/Latino in Massachusetts is smaller than the number of people living with HIV/AIDS who are white (non-Hispanic), we also need to consider that there are far fewer people of Hispanic/Latino heritage living in Massachusetts than white (non-Hispanic) individuals. Hispanic/Latino individuals represent 10% of the Massachusetts population compared to white (non-Hispanic) individuals who represent 78% of the population<sup>1</sup>. If HIV/AIDS had the same impact on the Hispanic/Latino population of the state as on the white (non-Hispanic), then there should be eight times as many cases in white (non-Hispanic) individuals, but there are less than twice as many. By calculating a rate which takes into consideration the differences in the population size, it is evident that the number of people living with HIV/AIDS for every 100,000 Hispanic/Latino individuals in Massachusetts is much higher than the rate for every 100,000 white (non-Hispanic) individuals. This is called a “crude rate” and is calculated by dividing the number of people living with HIV/AIDS by the population of interest (the total number of Hispanic/Latino individuals in Massachusetts, for example) and multiplying by 100,000. (See example 1.A below).

### Example 1.A: Calculation of crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (161.7 per 100,000)

Crude HIV/AIDS prevalence rate for white (non-Hispanic) individuals	$= (\text{number of white (non-Hispanic) individuals living with HIV/AIDS} \div \text{population size of white (non-Hispanic) individuals}) \times 100,000$ $= (8,297 / 5,132,633) \times 100,000$ $= (.0001616519) \times 100,000$ $= \mathbf{161.7}$
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However, sometimes, in addition to the population size being different, the age composition of the populations is different. In Massachusetts, black (non-Hispanic) and Hispanic/Latino populations are generally younger than white (non-Hispanic). The median age of black (non-Hispanic) people (29.7 years) and Hispanic/Latino people (24.5 years) is younger than that of white (non-Hispanic) people (38.8 years). Therefore, it is necessary to “age-adjust” the HIV/AIDS prevalence rate to get a true comparison of the impact of the disease across racial/ethnic groups without an effect from the differences in age composition. Age-adjustment of rates minimizes the distortion created by differences in age composition.

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<sup>1</sup> The denominators for prevalence calculations are based on year 2010 population estimates from the MDPH Bureau of Health Information, Statistics, Research and Evaluation

Age-adjusted rates are calculated by weighting the age-specific rates for a given population by the age distribution of a standard population. The weighted age-specific rates are then added to produce the adjusted rate for all ages combined. (See example 1.B below).

**Example 1.B: Calculation of age-adjusted HIV/AIDS prevalence rate for white (non-Hispanic) individuals, Massachusetts (137.5 per 100,000)**

<i>A</i>	<i>B</i>	<i>C</i>	<i>D</i>	<i>E</i>
<i>Age group (in years)</i>	<i># of prevalent HIV/AIDS cases</i>	<i>Population (2010)</i>	<i>2000 US standard population weight</i>	<i>Age-adjusted rate ((B÷C×D)×100,000)</i>
<1	0	48,010	0.013818	0.00
1-4	0	200,452	0.055317	0.00
5-14	4	571,967	0.145565	0.10
15-24	89	677,899	0.138646	1.82
25-34	500	603,245	0.135573	11.24
35-44	1133	676,064	0.162613	27.25
45-54	3446	841,315	0.134834	55.23
55-64	2393	697,852	0.087247	29.92
65-74	625	403,518	0.066037	10.23
75-84	101	275,380	0.044842	1.64
85+ years	6	136,931	0.015508	0.07
<b>Total</b>	<b>8,297</b>	<b>5,132,633</b>	<b>1.000000</b>	<b>137.5</b>

To see the effect of age-distribution on prevalence rates see Tables 8 and 9 below for a comparison of crude and age-adjusted rates by race/ethnicity.

**Table 6. Crude and age-adjusted HIV/AIDS prevalence per 100,000 population<sup>1</sup> on December 31, 2013 by race/ethnicity and gender: Massachusetts<sup>2</sup>**

<b>State Total:</b>	<b>Crude rate per 100,000</b>	<b>Age-adjusted rate per 100,000</b>
White, non-Hispanic	161.7	137.5
Black, non-Hispanic	1,383.0	1,416.4
Hispanic/Latino	743.2	959.3
Asian/Pacific Islander	91.8	94.1
<b>Total prevalence</b>	<b>292.7</b>	<b>266.3</b>
<b>Men:</b>	<b>Crude rate per 100,000</b>	<b>Age-adjusted rate per 100,000</b>
White, non-Hispanic	279.4	235.7
Black, non-Hispanic	1,611.9	1,694.7
Hispanic/Latino	1,031.8	1,409.4
Asian/Pacific Islander	147.0	150.8
<b>Total prevalence among men</b>	<b>432.0</b>	<b>389.8</b>
<b>Women:</b>	<b>Crude rate per 100,000</b>	<b>Age-adjusted rate per 100,000</b>
White, non-Hispanic	51.6	45.4
Black, non-Hispanic	1,169.2	1,181.8
Hispanic/Latina	465.0	573.9
Asian/Pacific Islander	41.1	42.5
<b>Total prevalence among women</b>	<b>162.2</b>	<b>151.6</b>
<sup>1</sup> The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation <sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 1/1/14		



**Table 7. Crude and age-adjusted rates of diagnosis of HIV infection per 100,000 population<sup>1</sup> by race/ethnicity and gender: Average annual rate 2010–2012<sup>2</sup>, Massachusetts<sup>3</sup>**

<b>State total:</b>	<b>Crude rate per 100,000</b>	<b>Age-adjusted rate per 100,000</b>
White (non-Hispanic)	5.0	5.1
Black (non-Hispanic)	53.4	52.7
Hispanic/Latino	28.3	29.8
Asian/Pacific Islander	6.1	5.4
<b>Total rate</b>	<b>10.5</b>	<b>10.6</b>
<b>Men:</b>	<b>Crude rate per 100,000</b>	<b>Age-adjusted rate per 100,000</b>
White (non-Hispanic) Men	9.1	9.0
Black (non-Hispanic) Men	60.1	59.3
Hispanic/Latino Men	43.1	45.3
Asian/Pacific Islander Men	10.5	9.2
<b>Total rate among men</b>	<b>15.8</b>	<b>15.7</b>
<b>Women:</b>	<b>Crude rate per 100,000</b>	<b>Age-adjusted rate per 100,000</b>
White (non-Hispanic) Women	1.3	1.4
Black (non-Hispanic) Women	47.0	46.5
Hispanic/Latina Women	14.1	15.4
Asian/Pacific Islander Women	2.1	1.8
<b>Total rate among women</b>	<b>5.5</b>	<b>5.6</b>
<sup>1</sup> The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation <sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999. <sup>3</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts. Data Source: MDPH HIV/AIDS Surveillance Program; Data as of 1/1/14		

**Table 9. People diagnosed with HIV infection by race/ethnicity<sup>1</sup> and reported risk: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

	White (NH)		Black (NH)		Hispanic/Latino	
Reported risk:	N	%	N	%	N	%
Male-to-male sex (MSM)	506	65%	135	20%	190	36%
Injection drug use (IDU)	72	9%	28	4%	69	13%
MSM/IDU	48	6%	6	1%	-- <sup>6</sup>	-- <sup>6</sup>
Heterosexual sex	31	4%	108	16%	80	15%
Other	0	0%	9	1%	-- <sup>6</sup>	-- <sup>6</sup>
Total undetermined/other	120	15%	379	57%	182	34%
• Presumed heterosexual sex <sup>4</sup>	23	3%	174	26%	47	9%
• Undetermined <sup>5</sup>	97	12%	205	31%	135	25%
<b>Total</b>	<b>777</b>	<b>100%</b>	<b>665</b>	<b>100%</b>	<b>533</b>	<b>100%</b>

<sup>1</sup> Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> Includes woman sex with man of unknown HIV status or risk. This category is limited to women.

<sup>5</sup> Includes man sex with woman of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>6</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

(NH) = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 10. Men diagnosed with HIV infection by race/ethnicity<sup>1</sup> and reported risk: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

	White (NH)		Black (NH)		Hispanic/Latino	
Reported risk:	N	%	N	%	N	%
Male-to-male sex (MSM)	506	75%	135	37%	190	48%
Injection drug use (IDU)	29	4%	22	6%	52	13%
MSM/IDU	48	7%	6	2%	8	2%
Heterosexual sex	10	1%	32	9%	34	9%
Undetermined <sup>4</sup>	81	12%	163	45%	111	28%
<b>Total<sup>5</sup></b>	<b>674</b>	<b>100%</b>	<b>362</b>	<b>100%</b>	<b>398</b>	<b>100%</b>

<sup>1</sup> Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> Includes man sex with woman of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>5</sup> Totals include pediatric and blood/blood products reported risks.

(NH) = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 11. Women diagnosed with HIV infection by race/ethnicity<sup>1</sup> and reported risk: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

	White (NH)		Black (NH)		Hispanic/Latina	
Reported risk:	N	%	N	%	N	%
Injection drug use	43	42%	6	2%	17	13%
Heterosexual sex	21	20%	76	25%	46	34%
Total undetermined/other	39	38%	216	71%	71	53%
• Presumed heterosexual sex <sup>4</sup>	23	22%	174	57%	47	35%
• Undetermined <sup>5</sup>	16	16%	42	14%	24	18%
<b>Total<sup>6</sup></b>	<b>103</b>	<b>100%</b>	<b>303</b>	<b>100%</b>	<b>135</b>	<b>100%</b>

<sup>1</sup> Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> Includes woman sex with man of unknown HIV status or risk. This category is limited to women.

<sup>5</sup> Includes those still being followed up for risk information, those who have died with no determined risk and those lost to follow-up.

<sup>6</sup> Totals include pediatric and blood/blood products reported risks.

(NH) = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 12. Percentage distribution of people diagnosed with HIV infection by Health Service Region (HSR)<sup>1</sup> and race/ethnicity: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

	White (NH)	Black (NH)	Hispanic/ Latino	API	Total
HSR	%	%	%	%	N
Boston HSR	32%	37%	25%	3%	<b>625</b>
Central HSR	34%	34%	27%	3%	<b>180</b>
Metro West HSR	43%	34%	19%	5%	<b>322</b>
Northeast HSR	37%	28%	30%	5%	<b>367</b>
Southeast HSR	53%	32%	13%	1%	<b>281</b>
Western HSR	34%	24%	41%	1%	<b>233</b>
Prisons <sup>4</sup>	25%	27%	42%	4%	<b>55</b>
<b>Mass. Total</b>	<b>38%</b>	<b>32%</b>	<b>26%</b>	<b>3%</b>	<b>2,065</b>

<sup>1</sup> Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at

[http://www.mass.gov/dph/aids/research/profile2005/app5\\_hrs\\_maps.pdf](http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf), for configuration of health service regions.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status.

(NH) = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 13. People living with HIV/AIDS on December 31, 2013 by Health Service Region (HSR)<sup>1</sup> and race/ethnicity: Massachusetts<sup>2</sup>**

HSR	White (NH)		Black (NH)		Hispanic/Latino		API		Other/Und.		Total
	N	%	N	%	N	%	N	%	N	%	N
Boston	2,406	40%	2,324	38%	1,220	20%	91	1%	38	1%	<b>6,079</b>
Central	687	42%	418	26%	494	30%	26	2%	7	<1%	<b>1,632</b>
Metro West	1,388	50%	967	35%	359	13%	71	3%	14	1%	<b>2,799</b>
Northeast	1,311	43%	743	24%	858	28%	103	3%	24	1%	<b>3,039</b>
Southeast	1,594	61%	591	23%	387	15%	17	1%	27	1%	<b>2,616</b>
Western	646	31%	417	20%	978	47%	16	1%	12	1%	<b>2,069</b>
Prison <sup>3</sup>	264	29%	284	31%	365	40%	5	1%	6	1%	<b>924</b>
<b>Total<sup>4</sup></b>	<b>8,297</b>	<b>43%</b>	<b>5,745</b>	<b>30%</b>	<b>4,665</b>	<b>24%</b>	<b>330</b>	<b>2%</b>	<b>128</b>	<b>1%</b>	<b>19,165</b>

<sup>1</sup> Reflects the health service region of a person's residence at the time of report (not necessarily current residence). See Epidemiologic Profile General Appendices, Health Service Region Maps, available at

[http://www.mass.gov/dph/aids/research/profile2005/app5\\_hrs\\_maps.pdf](http://www.mass.gov/dph/aids/research/profile2005/app5_hrs_maps.pdf) for configuration of health service regions.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> HSRs are regions defined geographically to facilitate targeted health service planning. While prisons do not constitute an HSR, the prison population is presented separately in this analysis because of its unique service planning needs. Prisons include only persons who were diagnosed with HIV/AIDS while in a correctional facility. These data do not reflect current incarceration status.

<sup>4</sup> Mass. total includes five persons living with HIV/AIDS with unknown residence at time of report.

(NH)= Non-Hispanic , API = Asian/Pacific Islander, Other/Und. = Other/Undetermined

Data Source: MDPH HIV/AIDS Surveillance Program, data as of 1/1/14

**Table 14. Ten cities/towns<sup>1</sup> in Massachusetts<sup>2</sup> with the highest proportion of black (non-Hispanic) individuals among HIV infection diagnoses (HIV DX): 2010–2012<sup>3</sup>**

Rank	City/Town	Number of HIV DX among black non-Hispanic individuals	Percent of Total HIV DX
1	Brockton	55	75%
2	Malden	12	48%
3	Waltham	14	45%
4	Worcester	39	43%
5	Medford	9	41%
6	Boston	223	40%
7	Lowell	23	39%
8	Lynn	19	37%
9	Framingham	7	35%
10	Cambridge	15	35%

<sup>1</sup> Cities with fewer than 20 HIV infection diagnoses from 2010–2012 are excluded. Note: reflects the city/town of a person's residence at the time of report (not necessarily current residence). People diagnosed while at a correctional facility are not included

<sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); data as of 1/1/14

**Table 15. Ten cities/towns<sup>1</sup> in Massachusetts<sup>2</sup> with the highest proportion of Hispanic/Latino individuals among HIV infection diagnoses (HIV DX): 2010–2012<sup>3</sup>**

Rank	City/Town	Number of HIV DX among Hispanic/Latino individuals	Percent of Total HIV DX
1	Lawrence	48	84%
2	Holyoke	27	69%
3	Chelsea	20	65%
4	Springfield	56	50%
5	Everett	9	38%
6	Worcester	31	34%
7	Somerville	10	31%
8	Lowell	15	25%
8	Lynn	13	25%
8	Framingham	5	25%

<sup>1</sup> Cities with fewer than 20 HIV infection diagnoses from 2010–2012 are excluded. Note: reflects the city/town of a person's residence at the time of report (not necessarily current residence). People diagnosed while at a correctional facility are not included

<sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999. Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); data as of 1/1/14

**Table 16. People diagnosed with HIV infection by race/ethnicity<sup>1</sup> and place of birth: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

	US		Puerto Rico/ US dependency <sup>4</sup>		Non-US	
Race/Ethnicity:	N	%	N	%	N	%
White (NH)	712	92%	-- <sup>6</sup>	<1%	64	8%
Black (NH)	300	45%	-- <sup>6</sup>	<1%	364	55%
Hispanic/Latino	180	34%	144	27%	209	39%
API	20	30%	0	0%	46	70%
<b>Total</b>	<b>1,229</b>	<b>60%</b>	<b>--<sup>6</sup></b>	<b>7%</b>	<b>690</b>	<b>33%</b>

<sup>1</sup> Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> Ninety-eight percent of people diagnosed with HIV infection from 2010–2012 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

<sup>5</sup> Totals include people of American Indian/Alaska Native and Other/Unknown race/ethnicity.

<sup>6</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

(NH) = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14



**Table 17. Men diagnosed with HIV infection by race/ethnicity<sup>1</sup> and place of birth: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

	US		Puerto Rico/ US dependency <sup>4</sup>		Non-US	
Race/Ethnicity:	N	%	N	%	N	%
White (NH)	615	91%	0	0%	59	9%
Black (NH)	215	59%	0	0%	147	41%
Hispanic/Latino	135	34%	113	28%	150	38%
API	18	33%	0	0%	36	67%
<b>All Males<sup>5</sup></b>	<b>996</b>	<b>66%</b>	<b>113</b>	<b>8%</b>	<b>394</b>	<b>26%</b>

<sup>1</sup> Data for American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> Ninety-eight percent of people diagnosed with HIV infection from 2010–2012 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

<sup>5</sup> Totals include people of American Indian/Alaska Native and Other/Unknown race/ethnicity.

<sup>6</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

(NH) = Non-Hispanic, API = Asian/Pacific Islander

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 18. Women diagnosed with HIV infection by race/ethnicity<sup>1</sup> and place of birth: Massachusetts<sup>2</sup>, 2010–2012<sup>3</sup>**

	US		Puerto Rico/ US dependency <sup>4</sup>		Non-US	
Race/Ethnicity:	N	%	N	%	N	%
White (NH)	97	94%	-- <sup>6</sup>	1%	5	5%
Black (NH)	85	28%	-- <sup>6</sup>	<1%	217	72%
Hispanic/Latino	45	33%	31	23%	59	44%
<b>All Females<sup>5</sup></b>	<b>233</b>	<b>41%</b>	<b>--<sup>6</sup></b>	<b>6%</b>	<b>296</b>	<b>53%</b>

<sup>1</sup> Data for Asian/Pacific Islander, American Indian/Alaska Native and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>2</sup> Effective, January 1, 2011 the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>4</sup> Ninety-eight percent of people diagnosed with HIV infection from 2010–2012 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

<sup>5</sup> Totals include people of American Indian/Alaska Native and Other/Unknown race/ethnicity.

<sup>6</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

(NH) = Non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 19. Black (non-Hispanic) individuals diagnosed with HIV infection born outside the US by leading countries of birth: Massachusetts<sup>1</sup>, 2010–2012<sup>2</sup>**

Rank	Country of Birth	Number of HIV DX <sup>3</sup> among Non-US born	Percent of HIV DX among all Non-US born Black (non-Hispanic) individuals
1	Haiti	113	31%
2	Uganda	37	10%
3	Cape Verde	32	9%
4	Kenya	25	7%
5	Ghana	22	6%
6	Nigeria	19	5%
7	Jamaica	14	4%
8	Cameroon	13	4%
9	Ethiopia	13	4%
10	Liberia	9	2%

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> HIV DX = HIV diagnoses

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); data as of 1/1/14

**Table 20. Hispanic/Latino individuals diagnosed with HIV infection born outside the US by leading countries of birth: Massachusetts<sup>1</sup>, 2010–2012<sup>2</sup>**

Rank	Country of Birth	Number of HIV DX <sup>3</sup> among Non-US born	Percent of HIV DX among all Non-US born Hispanic/Latino individuals
1	Dominican Republic	64	31%
2	Brazil	35	17%
3	El Salvador	20	10%
4	Columbia	18	9%
5	Guatemala	18	9%
6	Honduras	18	9%
7	Mexico	10	5%

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> HIV DX = HIV diagnoses

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding); data as of 1/1/14

**Table 21. People living with HIV/AIDS on December 31, 2013 by current age and race/ethnicity:<sup>1</sup> Massachusetts<sup>2</sup>**

Age in years	White NH		Black NH		Hispanic/Latino		State Total	
	N	%	N	%	N	%	N	%
Under 13	3	<1%	18	<1%	5	<1%	26	<1%
13 to 19	13	<1%	49	1%	33	1%	99	1%
20 to 24	77	1%	110	2%	84	2%	279	1%
25 to 29	202	2%	202	4%	187	4%	615	3%
30 to 34	298	4%	276	5%	285	6%	889	5%
35 to 39	448	5%	396	7%	411	9%	1,310	7%
40 to 44	685	8%	677	12%	587	13%	2,033	11%
45 to 49	1,469	18%	956	17%	898	19%	3,409	18%
50 to 54	1,977	24%	1,083	19%	949	20%	4,078	21%
55 to 59	1,507	18%	967	17%	647	14%	3,161	16%
60+	1,618	20%	1,011	18%	579	12%	3,266	17%
<b>Total<sup>3</sup></b>	<b>8,297</b>	<b>100%</b>	<b>5,745</b>	<b>100%</b>	<b>4,665</b>	<b>100%</b>	<b>19,165</b>	<b>100%</b>

<sup>1</sup> Data for American Indian/Alaska Native, Asian/Pacific Islander and Other/Unknown race/ethnicity are not presented due to small numbers

<sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

NH = non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 22. People diagnosed with HIV infection by age at diagnosis and race/ethnicity:<sup>1</sup> Massachusetts, 2010–2012<sup>2</sup>**

Age in years	White NH		Black NH		Hispanic/Latino		State Total	
	N	%	N	%	N	%	N	%
Under 13	0	0%	8	1%	3	1%	11	1%
13 to 19	9	1%	25	4%	18	3%	57	3%
20 to 24	76	10%	65	10%	57	11%	206	10%
25 to 29	78	10%	68	10%	77	14%	234	11%
30 to 34	85	11%	85	13%	78	15%	264	13%
35 to 39	102	13%	87	13%	76	14%	278	13%
40 to 44	117	15%	88	13%	66	12%	286	14%
45 to 49	134	17%	86	13%	65	12%	298	14%
50 to 54	80	10%	65	10%	44	8%	194	9%
55 to 59	51	7%	42	6%	27	5%	123	6%
60+	45	6%	46	7%	22	4%	114	6%
<b>Total</b>	<b>777</b>	<b>100%</b>	<b>665</b>	<b>100%</b>	<b>533</b>	<b>100%</b>	<b>2,065</b>	<b>100%</b>

<sup>1</sup> Data for American Indian/Alaska Native, Asian/Pacific Islander and Other/Unknown race/ethnicity are not presented due to small numbers

<sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

NH = non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14

**Table 23. People diagnosed with HIV infection under age 25 years within the years 2010–2012<sup>1</sup> and total population under age 25 years by race/ethnicity:<sup>2</sup> Massachusetts<sup>3</sup>**

	White NH		Black NH		Hispanic/Latino		State Total	
	N	%	N	%	N	%	N	%
HIV Infection Diagnoses	85	31%	98	36%	78	28%	<b>274</b>	<b>100%</b>
Total Population	1,498,328	71%	165,032	8%	298,888	14%	<b>2,096,538</b>	<b>100%</b>

<sup>1</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>2</sup> Data for American Indian/Alaska Native, Asian/Pacific Islander and Other/Unknown race/ethnicity are not presented due to small numbers.

<sup>3</sup> Effective January 1, 2011, the Massachusetts Department of Public Health, HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

NH = non-Hispanic

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), data as of 1/1/14; year 2010 population estimates are from the Massachusetts (Department of Public Health) Modified Age, Race/Ethnicity, & Sex Estimates 2010

<b>Table 24. Condom use at last sex, BRFSS respondents ages 18–64<sup>1</sup>: Massachusetts, 2011–2012</b>		
	<b>% Used Condom</b>	<b>Total N<sup>2</sup></b>
<b>Total:</b>	<b>25.3%</b>	<b>5,153</b>
<b>Sex:</b>	<b>% Used Condom</b>	<b>Total N</b>
Men	29.1%	2,175
Women	21.3%	2,978
<b>Race/Ethnicity:</b>	<b>% Used Condom</b>	<b>Total N</b>
White (non-Hispanic)	24.3%	4,151
Black (non-Hispanic)	32.4%	336
Hispanic/Latino	23.8%	371
<b>Number of Partners:</b>	<b>% Used Condom</b>	<b>Total N</b>
1	20.0%	4,791
2	40.4%	183
3+	75.0%	141
<b>Sex of Partner:</b>	<b>% Used Condom</b>	<b>Total N</b>
Man Respondent Reporting Sex with Only Men	46.3%	114
Man Respondent Reporting Sex with Only Women	28.1%	2,053
Woman Respondent Reporting Sex with Only Women	15.1%	78
Woman Respondent Reporting Sex with Only Men	21.2%	2,894
<sup>1</sup> Only asked of adults reporting sex (including oral, vaginal, or anal sex) in the past year		
<sup>2</sup> Only respondents with known values are included in this table; Column sub-totals may not equal overall total due to missing values		
<sup>3</sup> Unstable estimates with N < 50 or relative standard error >30% are suppressed		
Data Source: Massachusetts Behavioral Risk Factor Surveillance System (BRFSS), 2011–2012		